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# FATHOM OCEANOLOGY LIMITED

ELEVENTH  
ANNUAL  
REPORT  
1980



# President's report to the shareholders

## Summary

Pre-tax net income for the year ended March 31, 1980 was \$497,800 as compared with \$302,000 last year — an increase of 65% over the year. Net income after tax is \$272,800 this year compared with \$172,000 last year.

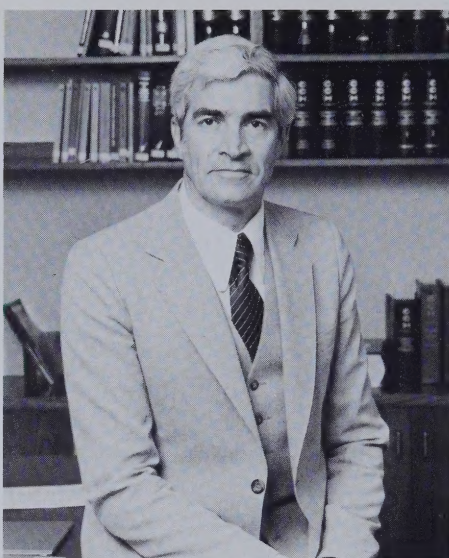
Because the tax loss carried forward from previous years was insufficient to cover income taxes due in fiscal 1980, the extraordinary item arising due to such loss carry forward is only \$87,000 in this fiscal year, as compared with the sum of \$130,000 in fiscal 1979. Therefore net income for the year is \$359,800 or 22¢ per share which compares with \$302,000 or 20¢ per share last year. The per-share comparison is affected by the significantly increased number of shares outstanding in 1980.

Our augmented work force and improved facilities were instrumental in handling the largest revenues in our history, which saw an increase of 56% to reach a level of \$3,627,700 from \$2,325,500 only one year ago.

Orders booked at \$1,480,000 were down from expectations due to the decision by a foreign navy not to proceed with a program which had been in our budget for some time. Nevertheless, we closed the year with an extremely high level of outstanding quotations which is expected to add strength to the orders for fiscal 1981.

## Completed contracts & manufacturing progress

Good progress was made on all long term contracts during the fiscal year but in particular on the contract with Raytheon Company for the Italian Navy.



John B. Stirling, President and Chief Executive Officer

The prototype unit achieved its factory acceptance test before representatives of both customer groups and was shipped during the third quarter. The first production unit was right on schedule at year end and is expected to reach inspection stage during the first quarter of fiscal 1981.

We received the orders at the end of fiscal 1979 for two major contracts covering spare parts for the Brazilian Navy VDS systems. These contracts were both substantially completed by year end.

Three more faired cable winches for Western Electric Company were booked and shipped during the period under review, and the ability to handle these units on a relatively short production cycle is an indication of improved organization and increased manufacturing capacity.

Orders received for FLEXNOSE fairings were well above forecast and this volume of business made a significant contribution to the revenues and profits for the fourth quarter.

## Operations

The organization changes carried out in the latter half of fiscal 1980 reflected themselves in increased capability to handle the 56% increase in revenue referred to earlier.

The facility in Mississauga was considerably improved, both through the renovation of office space, and in improved material and general stores arrangements. This made better use of production space and in effect added 17% to our usable floor area thus making room for the eight additional machine tools and other equipment acquired during the year. Additional footage was also leased to provide space for finished goods and work in progress.

Our work force grew steadily reaching a peak of 81 people during the year, most of the growth taking place in shop operations.

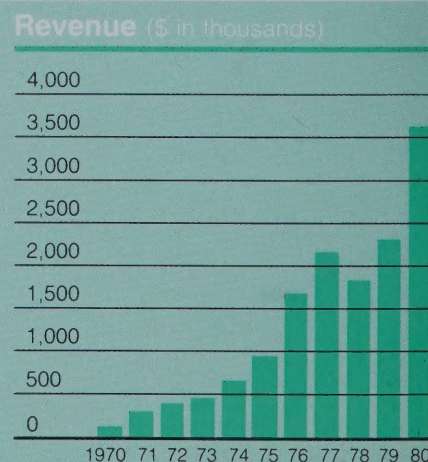
The marketing organization was reinforced by personnel able to concentrate on the planning and development side of the sales activities, and a management committee was set up to establish a strategic plan for the business. This important topic will be dealt with more thoroughly elsewhere in this publication.

However, as part of this study, it was decided to approach the USA market in a different fashion and to investigate the need for establishment of effective representation in the United Kingdom.

The establishment of a subsidiary company in Great Britain is expected to be completed early in the next fiscal year.

While both military and commercial markets show considerable opportunity for expansion of our company's activities, the sensitivity of the former market to politics as it relates to timing was demonstrated by the lower than expected orders received level for the fiscal year — the direct result of the decision by a foreign navy not to proceed with a VDS

Highlights	1980	1979
Revenue	\$3,628,000	\$2,325,000
Net income before extraordinary item	\$ 272,800	\$ 172,000
— Per share	\$ 0.17	\$ 0.11
— Fully diluted per share	\$ 0.15	\$ 0.09
Net income for the year	\$ 359,800	\$ 302,000
— Per share	\$ 0.22	\$ 0.20
— Fully diluted per share	\$ 0.19	\$ 0.16
Shareholders' equity	\$1,071,000	\$ 525,000





## News Items

- The prototype launch and recovery system for the Italian VDS system has completed its Factory Acceptance Tests and is scheduled for shipment by the end of November. The fish has already been shipped and has undergone highly successful beam pattern tests at Raytheon Company.
- Partial shipment has been made of the life cycle support spares for the Brazilian Navy.
- New orders booked to the present include a new winch and rebuilds for Western Electric Company, FLEXNOSE fairings for a foreign navy, a high speed VDS trial program with the U.S. Navy and the Canadian Armed Forces, an important design study for the Canadian Naval Services, and additional sonar dome components for Raytheon.

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FATHOM  
OCEANOLOGY LIMITED

SEMI-ANNUAL REPORT  
TO SHAREHOLDERS  
(UNAUDITED)

FOR SIX MONTHS ENDED  
SEPTEMBER 30, 1979



## TO THE SHAREHOLDERS

Profit for the six month period ended September 30, 1979 was \$142,820 or \$.09 per share including an extraordinary item of \$60,000 arising from the reduction in income taxes due to losses carried forward. This compares with a figure of \$91,000 or \$.06 per share for the corresponding period one year ago.

These results show a healthy improvement over the comparable period, in that revenue has increased by 40% with the profitability increasing by 57%. The backlog also remains healthy, standing at \$4,392,000 compared with \$4,994,000 at March 31, 1979.

The outlook for the second half of the current fiscal year foresees a period of high activity which will result in significant earnings improvement over the same period in the last fiscal year.

Steady progress has been made on the first of six VDS Systems for the Italian Navy, being supplied through Raytheon Company, in the United States, and Factory Acceptance Tests are scheduled to be carried out in late October.

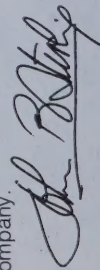
The other major activities in Manufacturing have been focussed upon the completion of three faired cable winches for Western Electric Company in the United States and the production of sonar domes both for Raytheon Company and for the Canadian Armed Forces.

R & D has made good progress in developing promising new ideas as well as in the commercialization of more established concepts. Through a jointly financed program we are developing some improvements to our FLEXNOSE™ fairings to permit use with specialized cables and to provide better performance at higher speeds.

Our financial statements show a steadily improving situation, and one of our goals during the current fiscal year is to achieve the status of a listed stock on the Toronto Stock Exchange. In order to increase the number of publicly held shares, it has been decided by members of the founders' Voting Trust to sell to the general public a limited number of shares formerly controlled by the Voting Trust, which were made available through a recent consolidation of their holdings.

On the administrative side, our staff has grown to 71 from 46 one year ago. Our new organization is undergoing some adjustment, and has made a significant contribution to the improved results which you see here. New machine tools have been added in our existing facility, and some additional space has been rented to provide for finished goods storage and additional light manufacturing.

The management team is continuing diligent efforts towards making fiscal 1980 another year of record success for your company.



JOHN B. STIRLING, P.Eng.  
President and Chief Executive Officer

November 22, 1979

# FATHOM OCEANOLOGY LIMITED

(Incorporated under the laws of Canada)

## Consolidated Statement of Operations

For the six months ended September 30th, 1979

(With comparative figures for the six months ended September 30, 1978)

	1979	(Unaudited) 1978
Revenue	\$ 1,399,586	\$ 995,967
Costs		
Manufacturing and engineering	860,086	622,038
Administrative (includes interest expenses of \$5,882 in 1979, \$21,215 in 1978)	396,680	282,931
	1,256,766	904,969
Net profit before income taxes and extraordinary item	142,820	90,998
Income taxes	60,000	38,200
Net profit before extraordinary item	82,820	52,798
Extraordinary item — reduction in income taxes arising from losses carried forward	60,000	38,200
Net profit for the period	142,820	90,998
Per share — before extraordinary item	\$ 0.05	\$ 0.03
— for the period	\$ 0.09	\$ 0.06

## Consolidated Statement of Changes in Financial Position

For the six months ended September 30th, 1979

(With comparative figures for the six months ended September 30, 1978)

	1979	(Unaudited) 1978
FUNDS WERE RECEIVED FROM:		
Issue of common shares	7,875	
Operations—		
Net profit before extraordinary item	82,820	52,798
Add depreciation and amortization, charges not requiring an outlay of funds	50,410	39,750
Funds received from operations	133,230	92,548
Extraordinary item	60,000	38,200
Total funds received	201,105	130,748
FUNDS WERE APPLIED TO:		
Purchase of fixed assets	59,494	26,463
Cost of patents	780	1,001
Decrease in long-term debt	6,008	5,556
Total funds applied	66,282	33,020
INCREASE IN WORKING CAPITAL	134,923	97,728
Working capital, beginning of period	465,426	230,511
Working capital, end of period	600,349	328,239



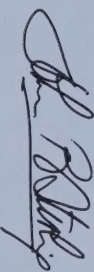
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At the time of writing this report, the third of six VDS units being supplied to the Raytheon Company is being readied for Factory Acceptance Tests. Fathom personnel supervised the shipboard installation of the first unit in Italy during the month of September.

Development work continues on the CASCAN project, supported by a favorable reaction to the recent deep ocean simulation tests carried out at Southwest Research Institute in San Antonio, Texas.

After almost nine years of trading publicly on the over-the-counter market, your Company's stock was officially listed for trading on the Toronto Stock Exchange on August 14, 1980. This should be considered a milestone in our history, marking our past achievements and recognizing our future objectives.

Your management team continues its diligent effort to make fiscal 1981 another successful year for the company.



JOHN B. STIRLING, P.Eng.  
President and Chief Executive Officer

October 31, 1980



**FATHOM**  
OCEANOLOGY LIMITED

QUARTERLY REPORT  
TO SHAREHOLDERS  
(UNAUDITED)

FOR SIX MONTHS ENDED  
SEPTEMBER 30, 1980



## TO THE SHAREHOLDERS

Profit before extraordinary item for the six month period ended September 30, 1980 was \$100,463 or 5¢ per share, compared with \$82,820 or 5¢ per share for the corresponding period one year ago.

Although these operating results show an improvement of 21% over those of a year ago, there is no change in the earnings per share figure due to the increased number of common shares now outstanding. No extraordinary items arose this year, as the company has absorbed all of its prior years' losses for income tax purposes.

Contributing to this steady improvement in profitability is a 16% increase in revenue over the comparative period last year. Further, orders received in the first six months of this year are running 58% above the same period last year. This will lead to increased manufacturing activity levels in the second half of this fiscal year, thereby yielding stronger operating results over those of the first half, which follows the experience of the last several years.

As previously reported, a major order was received from National Steel Shipbuilding Company in San Diego, California for five storage winches, a cable handling system, and other components.

Fathom personnel have travelled widely — as far afield as India, on the one hand, and Western Europe on the other — to promote your company's products, and in cooperation with our Fathom Oceanology (U.K.) Limited people have participated in Europec '80 in London, England.

## FATHOM OCEANOLOGY LIMITED

(Incorporated under the laws of Canada)

### Consolidated Statement of Operations

For the six months ended September 30, 1980

(With comparative figures for the six months ended September 30, 1979)

	1980	(Unaudited) 1979
Contract revenue	\$ 1,620,884	\$ 1,399,586
Product costs	942,456	852,306
Gross profit	678,428	547,280
Other expenses:		
Administrative	430,265	355,924
Research and development	71,700	48,536
	501,965	404,460
Net profit before income taxes and extraordinary item	176,463	142,820
Income taxes	76,000	60,000
Net profit before extraordinary item	100,463	82,820
Extraordinary item — reduction in income taxes arising from losses carried forward	—	60,000
Net profit for the period	100,463	142,820
Per share — before extraordinary item	\$ 0.05	\$ 0.05
— for the period	\$ 0.05	\$ 0.09

### Consolidated Statement of Changes in Financial Position

For the six months ended September 30, 1980

(With comparative figures for the six months ended September 30, 1979)

	1980	(Unaudited) 1979
FUNDS WERE RECEIVED FROM:	\$	\$
Issue of common shares	10,230	7,875
Operations—		
Net profit before extraordinary item	100,463	82,820
Add depreciation and amortization, charges not requiring an outlay of funds	59,910	50,410
Funds received from operations	160,373	133,230
Extraordinary item	—	60,000
Total funds received	170,603	201,105
FUNDS WERE APPLIED TO:		
Purchase of fixed assets	27,244	59,494
Cost of patents	—	780
Decrease in long-term debt	6,490	6,008
Total funds applied	33,743	66,282
INCREASE IN WORKING CAPITAL	136,860	134,923
Working capital, beginning of period	778,643	465,426
Working capital, end of period	915,503	600,349



system which had been on our tendering list for several years.

The orders received mix was such that several contracts were booked having a relatively low engineering input. While providing opportunities for short production cycles, this provided light loading for the engineering department, in contrast to our outlook for fiscal 1981, which will call for an expansion of our technical resources

The growth in business volume necessitated expansion of our quality assurance department and this was accompanied by an extension of the QA systems and controls.

Internal administration was also affected by the large increase in volume, and first steps were taken to convert part of our accounting and cost control systems to a more automated approach, a process we will accelerate in fiscal 1981.

## Research & development

Increased funds were allocated to product development during the year, on both new ideas and improvements to existing products. In addition, a joint program, partially financed by a client, contributed to an improved version of the FLEXNOSE fairing for new applications.

Much progress was made on a development program for the CASCAN buoyancy system, with the result that a full scale prototype was being constructed at year end with a view to ocean depth simulation at a recognized laboratory in the United States. CASCAN will also be a key part of our participation in the Offshore Technology Conference, to be held in Houston, Texas, in May 1980.

## Financial results

Reference to the bar charts on this page and the financial reports elsewhere in this report will indicate the excellent progress made in improving the financial well-being of your Company.

It is a real pleasure to report for the third consecutive year, that the net income, at

\$359,800, shows significant increase over the previous year, and the next most gratifying observation is to note the removal of the longstanding deficit which was eliminated midway through the year.

Cash reserves have remained at a satisfactory level, being \$238,600 compared to \$232,600 at the end of fiscal 1979; receivables are also above 1979 figures at \$860,000; inventories have been increased substantially from \$82,700 to \$418,500, mainly as a result of high material purchases for the production units of a major contract.

Fixed assets reflect our accelerated investment in machine tools and renovations to the office facilities, which amounted to \$200,000 before depreciation, all financed internally.

Accounts payable show an increase of 80% over last year's balance, mainly as a result of higher material purchases for our increased production levels and a higher accrual for the Fathom employees' profit sharing plan.

The balance sheet also reflects the virtual elimination of long term debt due to the conversion of the 12% convertible notes which at the end of fiscal 1979 amounted to \$172,000. The total shareholders' equity has more than doubled and now exceeds \$1,000,000.

## The future

1980 activity developed a significantly improved financial position for Fathom, one which provides a much better base for growth than was ever available in the past.

The planning and consolidation carried out during the year will make implementation of growth plans possible in 1981. Of course, selection of the best available opportunity for our company rests upon evaluation of many factors, and the present uncertain economic climate in Canada and throughout the world adds to the difficulty.

However, we firmly believe that against the background of intensive development

of the world's ocean resources, Fathom expertise has an important role to play.

## Personnel

This report would be incomplete without appreciative reference to the contribution made by the people of Fathom, both long service veterans and those who joined us during the year.

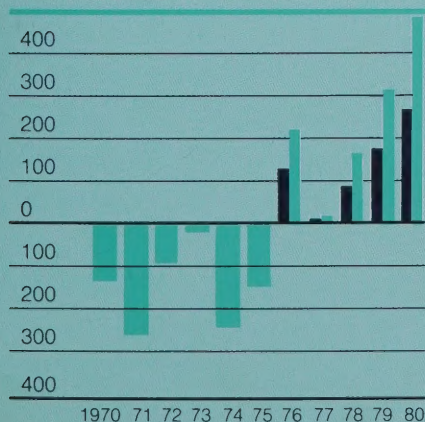
As the diagram on this page indicates, wages and salaries account for the largest expense we incur, but even more important, those who work at Fathom — in whatever capacity — build in the high quality demanded by our clients.

We thank our employees for their excellent effort in this record fiscal year.



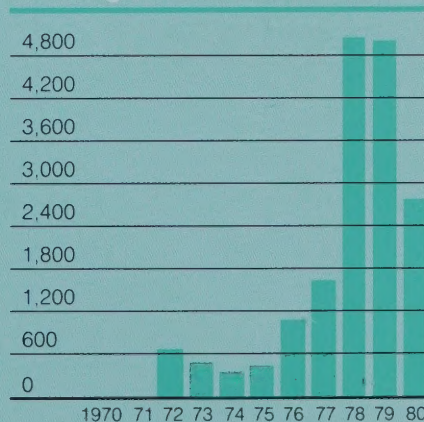
John B. Stirling,  
President and Chief  
Executive Officer.

Net income (\$ in thousands)



■ Net income before taxes and extraordinary item.  
■ Net income before extraordinary item.

Backlog (\$ in thousands)



Revenue distribution — 1980

Capital acquisitions - 3%
Taxes - 4%
Net Income - 8%
Supplies & services - 18%
Materials - 25%
Wages & salaries 42%



# FATHOM OCEANOLOGY LIMITED

(Incorporated under the Canada Business Corporations Act)

## Consolidated balance sheet

March 31, 1980 (with comparative figures at March 31, 1979)

Assets	1980	1979
Current assets:		
Cash	\$ 38,586	\$ 32,633
Bank deposit receipts	200,000	200,000
Accounts receivable	860,189	602,169
Costs and estimated earnings in excess of billings on uncompleted contracts	291,440	227,225
Inventory, at lower of cost and net realizable value	418,463	82,711
Prepaid expenses	28,470	25,452
Total current assets	1,837,148	1,170,190
Fixed, at cost (note 2(b)):		
Equipment	450,904	345,333
Tooling	283,086	274,041
	733,990	619,374
Less accumulated depreciation	472,146	400,025
	261,844	219,349
Patents and leasehold improvements at amortized cost	62,765	35,321
Total fixed assets	324,609	254,670
	<u>\$2,161,757</u>	<u>\$1,424,860</u>

On behalf of the Board:

K. R. Olsen, Director

John B. Stirling, Director

(See accompanying notes)



## Liabilities and shareholders' equity

	1980	1979
<b>Current liabilities:</b>		
Accounts payable and accrued charges	\$ 536,778	\$ 296,623
Income taxes payable	115,979	—
Billings in excess of costs and estimated earnings on uncompleted contracts	333,590	336,908
Due to Ontario Development Corporation (note 2(b)) —		
Export support loan	49,662	49,662
Current portion of venture capital loan	12,257	11,333
Total current liabilities	1,048,266	694,526
<b>Long-term debt:</b>		
12% convertible notes (note 2(a))	—	172,050
Venture capital loan (note 2(b))	21,485	33,742
Deferred income taxes	21,000	—
Total liabilities	1,090,751	900,318
<b>Shareholders' equity:</b>		
Share capital (notes 2(a) and 3) —		
Authorized:		
Unlimited common shares		
Issued:		
1,859,966 common shares (1979 — 1,536,667 shares)	900,033	713,343
Retained earnings (deficit)	170,973	(188,801)
	1,071,006	524,542
	\$2,161,757	\$1,424,860

(See accompanying notes)



## Consolidated statement of income and retained earnings

For the year ended March 31, 1980 (with comparative figures for 1979)

	1980	1979
Contract revenue	\$3,627,677	\$2,325,554
Product costs	2,061,446	1,364,422
Gross profit	1,566,231	961,132
Other expenses (income):		
Administrative	958,329	574,685
Research and Development	113,735	32,550
Interest — long-term debt	24,804	24,687
— bank and other indebtedness — net	(13,157)	16,875
Foreign exchange loss (gain)	(15,254)	10,324
	1,068,457	659,121
Income before income taxes and extraordinary item	497,774	302,011
Income taxes	225,000	130,000
Income before extraordinary item	272,774	172,011
Extraordinary item — reduction in income taxes arising from losses carried forward (note 6)	87,000	130,000
Net income for the year	359,774	302,011
Deficit, beginning of year	(188,801)	(490,812)
Retained earnings (deficit), end of year	\$ 170,973	\$ (188,801)
Income per share:		
Before extraordinary item	\$0.17	\$0.11
For the year	\$0.22	\$0.20
Fully diluted income per share:		
Before extraordinary item	\$0.15	\$0.09
For the year	\$0.19	\$0.16

(See accompanying notes)



## Consolidated statement of changes in financial position

For the year ended March 31, 1980 (with comparative figures for 1979)

	1980	1979
<b>Funds provided from:</b>		
Operations —		
Income before extraordinary item	\$ 272,774	\$ 172,011
Charges to operations not resulting in an outlay of funds:		
Depreciation and amortization	111,842	79,231
Deferred income taxes	21,000	—
Funds provided from operations	405,616	251,242
Reduction of income taxes	87,000	130,000
Issue of common shares	14,640	3,825
Total funds provided	507,256	385,067
 <b>Funds were applied to:</b>		
Purchase of fixed assets	181,781	138,795
Decrease in long-term debt (excluding \$172,050 in 1980 on the conversion of notes to common shares)	12,257	11,333
Total funds applied	194,038	150,128
Increase in working capital	313,218	234,939
Working capital, beginning of year	475,664	240,725
Working capital, end of year	\$ 788,882	\$ 475,664
 <b>Represented by:</b>		
Current assets	\$1,837,148	\$1,170,190
Less current liabilities	1,048,266	694,526
	\$ 788,882	\$ 475,664

(See accompanying notes)



## Notes to consolidated financial statements

March 31, 1980

### 1. Accounting policies

The following is a summary of significant accounting policies followed in the preparation of the consolidated financial statements:

#### (a) Basis of consolidation —

The consolidated financial statements include the accounts of the company and its wholly-owned subsidiaries, Hale & Associates Limited and Fathom Inc.

#### (b) Contracts —

Profits on contracts are recorded using the percentage of completion method. Complete provision is made for losses on contracts in progress when they first become known. In the case of contracts extending over one or more years, revisions in cost and profit estimates, which can be significant, are reflected in the accounting period in which the relevant facts become known.

When the company enters into contracts with customers to develop and produce specialized equipment with the expectation that the Canadian Government will share the specific development costs with the customer, the related government grants are accounted for as revenue by the company.

#### (c) Fixed assets —

Fixed assets are recorded at acquisition cost. Government grants when received specifically for certain fixed assets are deducted from the acquisition costs of those assets. Costs which extend the useful life of a fixed asset are capitalized. All other costs of repairs and maintenance are charged to operations as incurred.

Depreciation is recorded in the accounts on the declining balance basis at the following annual rates:

Equipment	20%
Tooling	33⅓%

The costs incurred for patents, including patents pending, are capitalized and amortized on a straight-line basis over a ten-year period. Leasehold improvements are amortized on a straight-line basis over the term of the lease.

#### (d) Income taxes —

The company follows the tax allocation method of accounting for income taxes. Deferred income taxes result from claiming deductions for income tax purposes in advance of charging such amounts in the accounts.

#### (e) Research and development —

Research and development costs, excluding costs of patents and patents pending, are charged to operations as incurred. Where government grants are received for research and development projects initiated by the company for its own purposes, these grants are deducted from the research and development costs.

#### (f) Exchange translation —

Certain of the companies' transactions occur in foreign currencies. Current assets and current liabilities relating to these transactions have been translated into Canadian currency at the rate of exchange prevailing at the year end. Revenue and expenses have been translated at exchange rates prevailing on the date of such transactions. The exchange gains and losses arising on translation have been included in income for the year.

### 2. Notes and loans payable

#### (a) 12% convertible notes —

During the year the notes which had a principal value of \$172,050 were converted (at 1 share for every \$0.60 of notes) into 286,749 shares.

#### (b) Due to Ontario Development Corporation —

- (i) The venture capital loan, which matures in 1983 bears interest at 8% and is repayable in blended monthly payments of principal and interest of \$1,206.
- (ii) Under arrangements with respect to the export support loan the company may borrow up to \$500,000 at an interest rate of 12½% annually to finance export orders.
- (iii) The venture capital and export support loans are secured by a floating charge on the company's assets and a chattel mortgage on equipment.

### 3. Share capital

During the year:

- (a) 11,000 shares were issued for \$3,825 cash under the company's share purchase plan;
- (b) 25,500 shares were issued for \$10,815 cash under the company's stock option plan;
- (c) the 12% notes were converted into 286,749 shares; and
- (d) 50 treasury shares were issued to two long-service employees for nominal consideration.



Under the share purchase plan certain senior officers and key employees have subscribed to purchase 11,000 shares at the lesser of the initial prices of \$0.315 and \$0.36 or 90% of the market price on the last market day of each subscription year exercised. These shares may be purchased up to February, 1981.

Under the company's stock option plan, options to purchase up to 149,500 shares at prices ranging from \$0.315 to \$0.63 have been granted to certain senior officers. The options expire at various dates up to January, 1984.

#### 4. Commitments

- (a) The company has purchased forward exchange contracts requiring delivery of U.S. \$1,195,000 in varying monthly amounts at an average exchange rate of \$1.143.
- (b) The company has outstanding letters of credit in the amount of \$233,000.

#### 5. Contingent liabilities for Government of Canada grants

In previous years the company received grants of \$909,000 for the development of towing systems, of which \$650,000

may be repayable on the basis of future sales arising from the developed technology.

To March 31, 1980, no provisions have had to be made in the company's accounts with respect to the possible repayment of these grants.

#### 6. Income taxes

Prior years' losses of approximately \$200,000 have been fully utilized to reduce taxable income of the current year.

#### 7. Pension Plan

Based on an actuarial valuation of the company's pension plan, the present value of the unfunded past service liability at March 31, 1980 amounted to \$90,000 which the company intends to fund and charge to earnings at the rate of \$10,000 annually over the next thirteen years. Current service costs of \$7,300 have been charged to operations during the year.

## Auditors' Report

To the Shareholders of  
Fathom Oceanology Limited:

We have examined the consolidated balance sheet of Fathom Oceanology Limited as at March 31, 1980 and the consolidated statements of income and retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the company as at March 31, 1980 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Mississauga, Canada,  
May 21, 1980.

Clarkson Gordon  
Chartered Accountants



# To Fathom the future

Elsewhere in this publication we have examined the progress made in the last fiscal year and also reviewed the trends of the past decade.

## Early chartwork

From its beginnings as Hale and Associates, an engineering consulting practice, the emphasis of Fathom's endeavours has always been on expertise in the field of new technology.

Originally the development of high speed submerged towing was restricted to surveillance equipment, but this was later expanded into commercial applications such as the search for oil and gas through sonar, seismic and hydrocarbon detection, and further to include environmental analysis.

As the market for designs and equipment spread from Canada, the business adopted a truly international character, and Fathom now counts clients in Australia, Brazil, Finland, France, Great Britain, Germany, Holland, Italy, Japan, Norway, Spain, and, of course the United States.

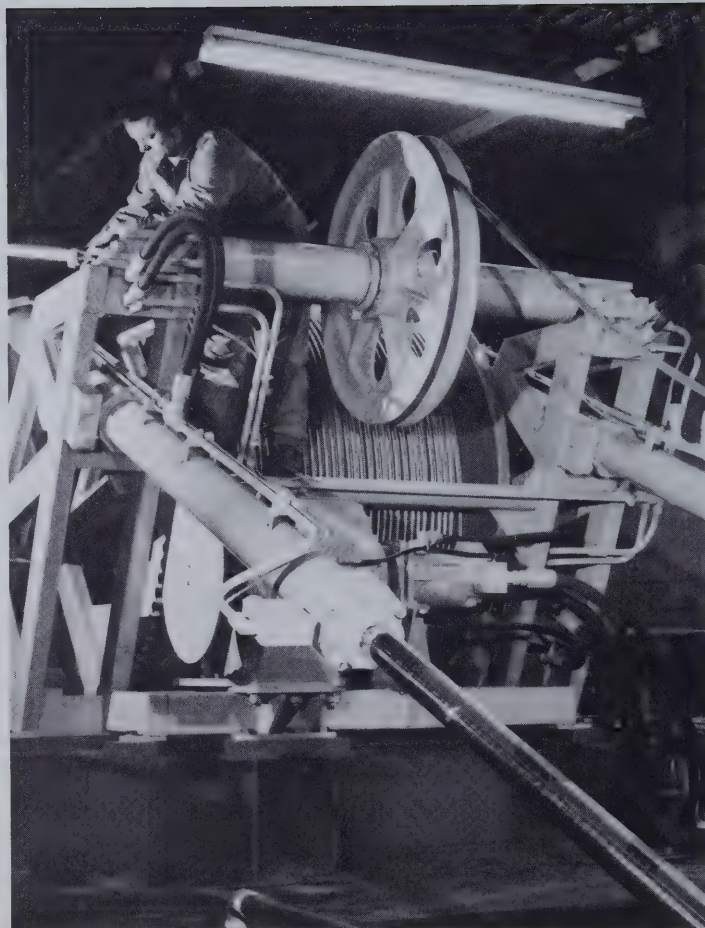
Paralleling the market expansion, the company's list of proprietary products grew, beginning with the family of FLEXNOSE fairings for the streamlining of cables to reduce towing drag, through the RIGSTREAM snap-on system for similar use on mooring cables and low speed towing applications, to huge PIPESTREAM fairings used on offshore drill risers to permit drilling in deep waters where currents would possibly destroy drill pipe not so protected.

The towing technology also led to expert knowledge in areas such as special oceanographic winches, launch and recovery units, ship's motion compensating mechanisms, and the necessary hydraulic, electrical and mechanical engineering skills to design and build systems having applications all the way from 6,000 meters depth at 2 knots towing speed to 100 meters at speeds approaching 40 knots.

## Sailing the seventies

The same innovative problem-solving approach led to the development of STARSTRAKE, a PVC extrusion which prevents vortex shedding and vibration in underwater structures due to current flow, the chief ingredient of which is an unique method of deployment.

A product still in the development stage, but attracting much industry attention is the CASCAN



1. The first of six winching units being built for the Italian Navy on the Fathom test bed.

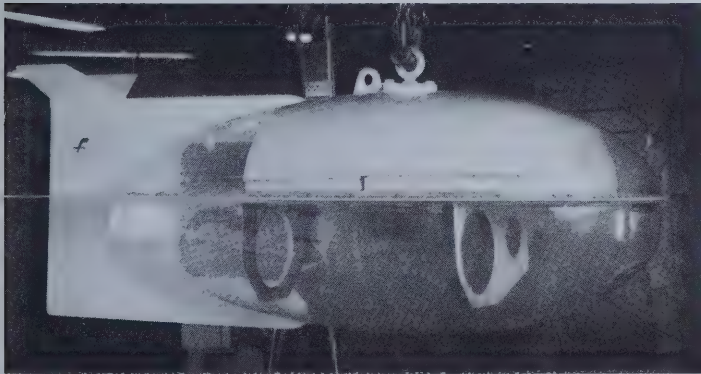


2. Representatives of the Italian Navy, Raytheon Company and Fathom meet on the occasion of the acceptance of the first unit.

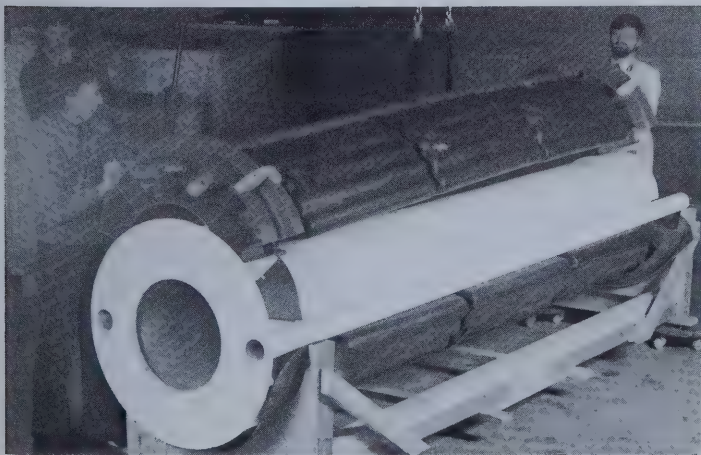




3. One of many navy frigates that carry the Fathom sonar dome which is attached to the underside of the hull.



4. Commercial exploration fish under construction in the Fathom plant.



5. The CASCAN prototype test unit being prepared for deep ocean simulation testing at a Texas-based proving lab.

riser buoyancy system. This device, for which patents have been applied, is a novel means of providing a counterbalance to the massive weight of the drill string casing as it hangs suspended from the drill ship or semi-submersible — a problem which becomes increasingly acute as the oil companies probe the deeper waters in the world's oceans.

As the 1980's unfold, Fathom's management group is concentrating its efforts on a number of business opportunities and approaches developed during strategic planning sessions.

### Looking through the eighties

We plan to adapt and apply the technology of design and manufacture of products with the capability of performance and survival in the hostile oceanic environment to new opportunities which we foresee, not only in military, but also in commercial fields.

The military sphere would include a shifting emphasis in the variable depth sonar (VDS) system to include mine counter measures (MCM) methods using a variety of platforms. We also will apply ourselves to means of updating present anti-submarine VDS systems to improve range and performance characteristics.

Knowing that Fathom already enjoys an enviable reputation for its high quality of design and performance in the exclusive world of VDS, we believe that we can broaden our thrust in these newer areas.

In parallel with this activity, we wish to expand our coverage of the fairing market to complement the success of our FLEXNOSE and RIGSTREAM products. Modification of the basic FLEXNOSE design is already well under way to permit its application to new specialized uses.

### Offshore oil & gas

In the commercial markets, of course, the exploration and production side of the offshore oil and gas industry beckons as an opportunity for expansion and as a means of balancing the fluctuations of the military markets.

Here we look to the possibility of acquisition and or manufacture and sale of licensed products, not only the development of the proprietary products to which we have already referred.

Fathom Oceanology is a supporter of the fledgling Canadian Ocean Industries Association, itself a



product of a Canadian Ocean Industry task force on which we served, that presented a series of recommendations to the Federal Department of Industry Trade & Commerce in late 1978.

In company with other firms, we view with concern the various provincial attempts to legislate access to Canada's offshore oil development. Part of the difficulty lies in the lack of a comprehensive Canadian industrial strategy. Another part of the problem lies in the need for a vehicle to focus the very considerable Canadian expertise in the ocean industry field on the potential markets. Fathom believes that support of the COIA may help to alleviate this latter shortcoming, and provide a thrust for more R & D support at all levels of government.

In spite of the attendant problems, Canada's offshore energy potential is enormous, and we feel that it represents a real opportunity for growth to the company.

Before leaving this realm of our growth plans, we should consider the area of renewable energy resources. In this context, we foresee an opportunity to harness the power of wave action, and have done some preliminary feasibility studies, which show promise.

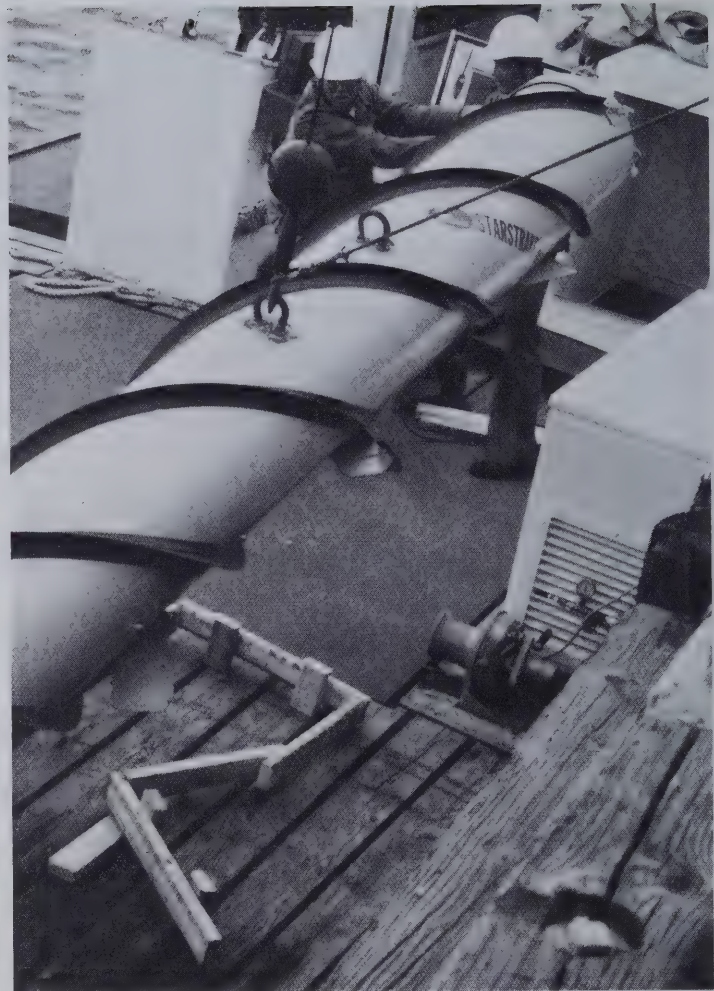
Generally speaking, our search for new products and new opportunities must meet certain criteria in order to be of interest to Fathom. Quite aside from fundamental elements of investment and profitable returns, we believe that new projects should fit well with our expertise in at least two of the three specialties of marketing, engineering or manufacturing.

### **Channels to market**

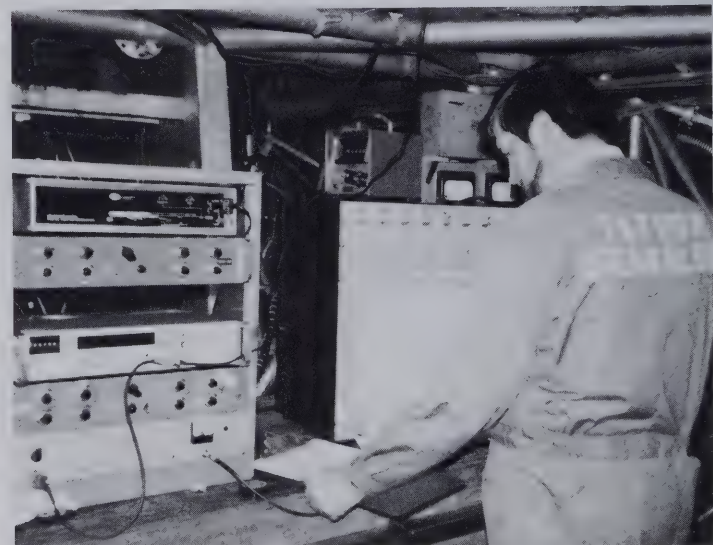
Considerations of the future would be remiss if they did not include market coverage in a geographic sense. Early in the next fiscal year we will establish a subsidiary company in the United Kingdom, to improve our market coverage in that country as well as provide a better approach to the European Economic Community.

In addition, we will launch a review of our market approach to the United States, which presently provides a substantial proportion of our business, but which, we believe, can provide a further opportunity for growth.

Of course, our marketing staff is very much involved not only with the direct sales activities of the company, but also with the strategic consideration to which we have addressed

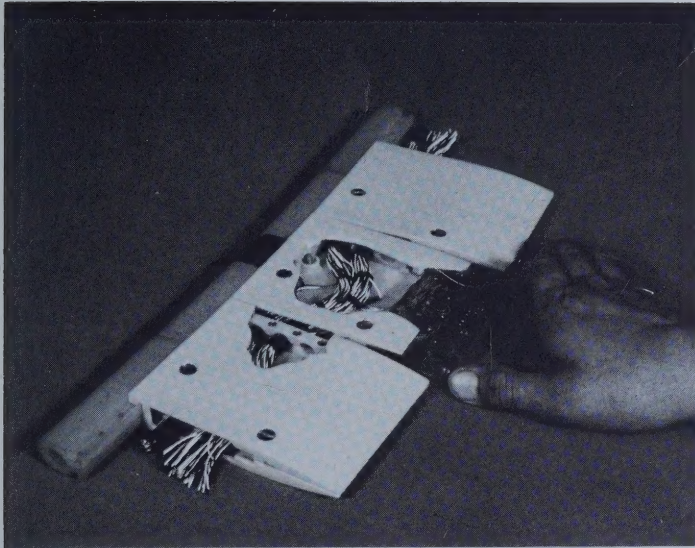


6. Structure fitted with STARSTRAKE vortex shedding vibration suppressor on U.S. Coast Guard vessel en route to installation site.

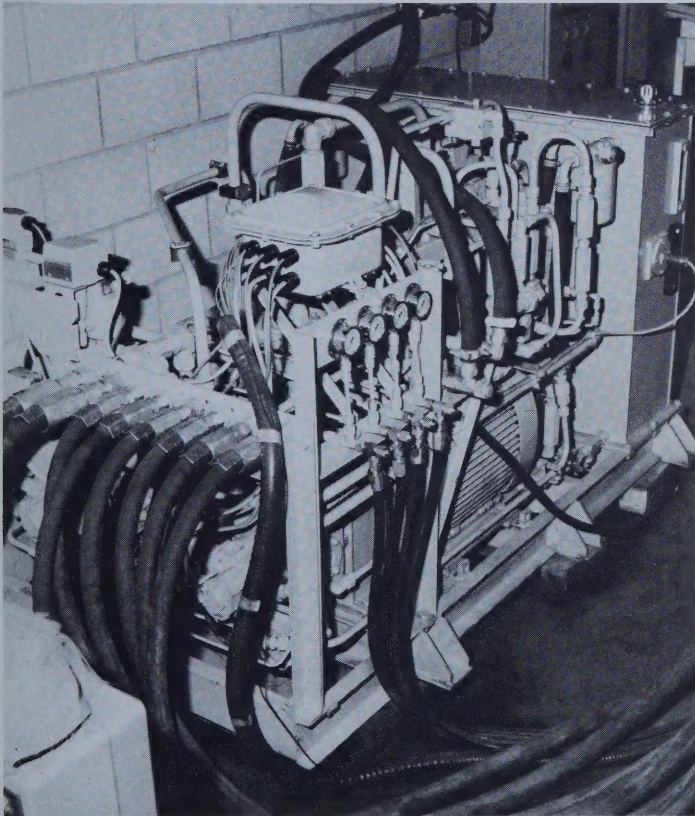


7. Fathom R&D technologist on site at the Naval Ships Research & Development Center — Washington, D.C.





8. Sophisticated example of FLEXNOSE fairing with built-in electronic sensing package. It was made specially for experimental work undertaken at the Johns Hopkins Applied Physics Laboratory in the United States.



9. One of the hydraulic power units forming part of the equipment being made for the Italian Navy.

ourselves in these pages. In order to reinforce this latter activity, we propose further additions to our resources in the coming year.

### **The engine room**

We have touched on marketing and technical matters but do not wish to neglect consideration of our manufacturing capability. As the notes for fiscal 1980 reported, we have considerably increased our manufacturing facilities, but recognize that our present Mississauga facility will not permit unlimited growth.

Therefore we are developing plans for facilities improvements or relocation to take effect during the next fiscal year. Meanwhile we will continue our upgrading of the productive equipment we need to reach our manufacturing goals of quality, cost and quantity.

### **Landfalls ahead**

The goals we have set for ourselves will only be met by the careful integration of the resources we have described above. But expressed in financial terms, we wish to achieve a meaningful growth in revenues, coupled with a growth in net earnings per share, as well as keeping the after tax return on shareholders' equity above the general level of manufacturing enterprises.

We have confidence in our management team to achieve these goals and objectives in the face of the uncertain economic future of much of the western world. Some of these problems will undoubtedly provide opportunities for innovation, and that, after all, is how your company expects to grow through the decade of the eighties.

FLEXNOSE, RIGSTREAM, PIPESTREAM, and STARSTRAKE are registered trademarks of Fathom Oceanology Limited and its subsidiaries.



# Directors and senior management

## Directors

\***K. R. OLSEN**, Hudson, Quebec  
Chairman, Fathom Oceanology Limited; Vice Chairman and Chief Executive Officer, G. M. Gest Inc. and Subsidiaries; Executive Vice President, Atlas Construction Inc.

**R. L. I. FJARLIE**, Maxville, Ontario  
Vice Chairman, Fathom Oceanology Limited

**J. B. STIRLING**, Mississauga, Ontario  
President and Chief Executive Officer, Fathom Oceanology Limited

**N. E. HALE**, Mississauga, Ontario  
Vice President and Director of Research & Development, Fathom Oceanology Limited

\***K. A. POWERS**, Toronto, Ontario  
Vice President, Federal Business Development Bank

\***J. B. FOOTE**, Campbellcroft, Ontario  
Industrial Commissioner and Manager, Chamber of Commerce, Port Hope, Ontario

**J. M. BERESFORD**, Ottawa, Ontario  
President, Rideau Shipping Company Limited

\***A. H. C. LEWIS**, Toronto, Ontario  
Vice President and Treasurer, Datacrown Limited

\*Member of the audit committee

## Officers

**K. R. OLSEN**, Chairman  
**R. L. I. FJARLIE**, Vice Chairman  
**J. B. STIRLING**, President and Chief Executive Officer  
**N. E. HALE**, Vice President and Director of R&D  
**J. O. EMPEY**, Vice President, Manufacturing  
**R. R. WALKER**, Vice President, Marketing  
**D. W. FAIRLES**, Treasurer and Controller  
**R. A. DONALDSON**, Secretary

## Head office and plant

863 Rangeview Road, Mississauga, Ontario, L5E 1H1  
Tel. (416) 274-1551 Telex 06-960226

## Subsidiary companies

Fathom Oceanology (U.K.) Limited, Bristol, England  
Fathom Inc., Santa Barbara, California, U.S.A.  
Hale & Associates Limited, Mississauga, Ontario

## Transfer agent and registrar

National Trust Company Limited, Toronto, Ontario and Calgary, Alberta

## Banker

Bank of Montreal, Toronto, Ontario

## Auditors

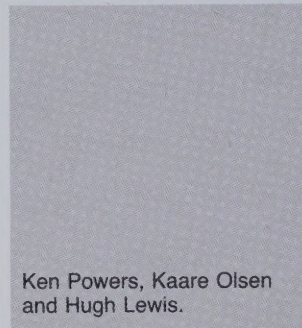
Clarkson Gordon, Mississauga, Ontario

## Legal counsel

Blake, Cassels & Graydon, Toronto, Ontario



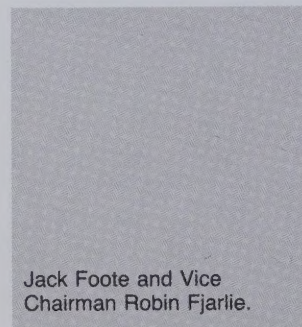
John B. Stirling confers with Neville Hale and Bob Walker.



Ken Powers, Kaare Olsen and Hugh Lewis.



Jack Foote and Vice Chairman Robin Fjarlie.

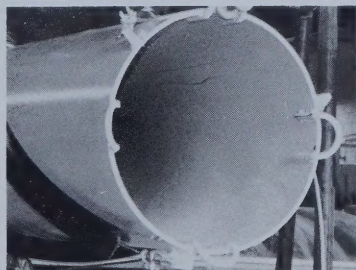
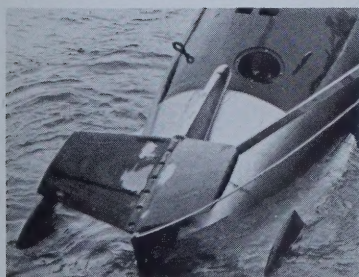
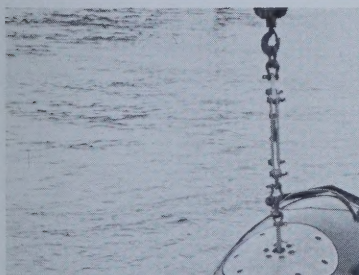
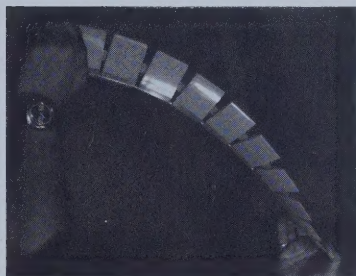
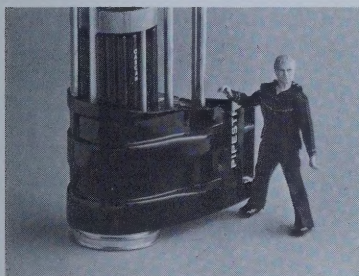
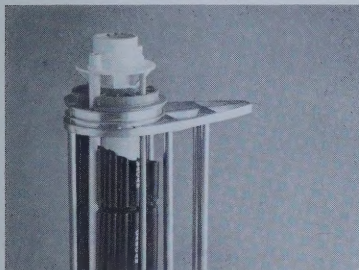
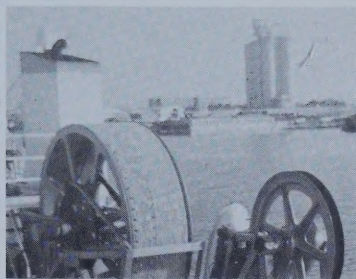
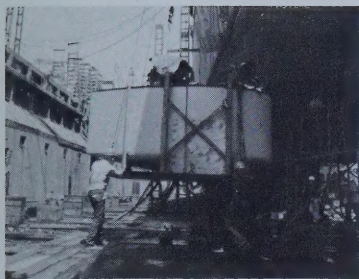


J. "Mac" Beresford, J. Derek Wilson and Neville Hale, some of the directors of the newly established Fathom Oceanology (UK) Ltd. in conversation.



Ken Berry, Manager Quality Assurance, Dave Ballem, Chief Engineer, discuss a point with Sam Fairles and Jim Empey.





**A Sonar dome:** Dry dock operation. Sonar dome being fitted to a U.S. Navy frigate.

**B Cascan and pipestream for offshore drilling:** Scale model demonstrating the combination of PIPESTREAM fairing and CASCAN buoyancy system as fitted to a common marine drill riser.

**C Exploration towing system:** Commercial exploration towing system fitted to the exploration vessel 'Decca Profiler' for service in the Gulf of Mexico.

**D Flexnose cable fairing:** A section of FLEXNOSE fairing demonstrating bend and twist flexibility.

**E Sonar towed fish:** Static balancing tests on the first towed fish for the Italian Navy contract.

**F Starstrake vortex shedding suppressor:** STARSTRAKE being fitted to a length of pipe in the Fathom plant.

A	C
B	C
B	D
E	E
E	E
F	F

#### Annual meeting

The annual meeting of the shareholders of Fathom Oceanology Limited will be held in the Simcoe Room of the Sheraton Centre, Toronto at 4 P.M. on the 17th day of July 1980.





Solving problems in depth